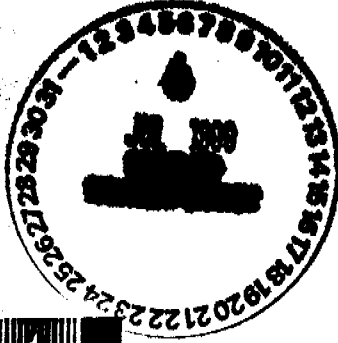


APR 6 1999



Draft Final Solar Ponds Plume Decision Document

RF/RMRS-98-286.UN



April 1999

ADMIN RECCRD

1101-B-00031

Kaiser-Hill Environmental Systems and Stewardship

ENVIRONMENTAL CHECKLIST

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

1. Project Name: Solar Ponds Plume Remediation
2. Date Submitted: 4/22/99
3. Proposed Project Start Date: Construction of the system is scheduled to start in June 1, 1999.
4. Charge Number: CK3400P1
5. WAD Number: 083
6. Project Manager (company, bldg., ext.): Annette Primrose, T893B, 4385
7. Kaiser-Hill Manager (bldg., ext.): Lane Butler B130 x.5245, Tom Greengard B130 x. 5635
8. Prepared By (company, bldg., ext.): Annette Primrose, RMRS, T893B, x.4385
9. Project Description:

At present, water collected from the Solar Ponds Plume (SPP) by the Interceptor Trench System (ITS) is treated by flash evaporation at Building 374; however, the present collection system is not effective in capturing all contaminated groundwater flow from the Solar Evaporation Ponds (SEP). An alternative treatment method was identified in the IM/IRA (April 1998). The proposed approach to the SPP remediation is to install a reactive barrier north of the SEPs on the northern side of the North Access Road and to utilize treatment cells containing zero-valence iron and organic media placed at the west end of the barrier. The ITS system upstream of the barrier will be left in place to enhance recovery of groundwater.

Reviewed for Classification/UNCI

By: _____

Date: _____
**DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE**

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	YES	NO	NOTES
10. Clean Air Act (CAA):			
If known, will the project require a new or modified permit?	<u> </u>	<u> X </u>	Assuming that all excavated soil contains the greatest activity of radionuclides, as determined by trench soil samples, the estimated EDE to the most impacted member of the public would be 2.2E+03.
Will the project generate air emissions (e.g., dust clouds; diesel generator)?	<u> X </u>	<u> </u>	During construction dust suppression will be performed to minimize the potential for particulate dispersion. However minor dust and diesel generator emissions are expected.
Will the project activities occur in a facility with existing air monitors?	<u> </u>	<u> X </u>	
If YES, please explain below, including where release would go, or in #9, Project Description.			
11. Clean Water Act (CWA):			
If known, will the project require a new or modified permit?	<u> </u>	<u> X </u>	The discharge from the treatment unit is governed by the NPDES permit waiver.
Could project activities release pollutants (e.g., soils) to surface water?	<u> X </u>	<u> </u>	Construction activities could adversely impact water quality through erosion. Silt fences will be used to prevent eroded soils from reaching North Walnut Creek.
Could project activities release liquid pollutants?	<u> </u>	<u> X </u>	No.
If YES, please explain below, including where release would go, or in #9, Project Description.			
12. Resource Conservation and Recovery Act (RCRA):			
If known, will a RCRA permit or permit modification be required?	<u> </u>	<u> X </u>	
Will the project generate, treat, store, or dispose of hazardous, radioactive, or mixed waste?	<u> </u>	<u> X </u>	The project will generate small amounts of construction debris which is not expected to be hazardous radioactive or mixed
Will the project involve a removal?	<u> </u>	<u> X </u>	
Will the project include a partial RCRA closure?	<u> </u>	<u> X </u>	
Will the project include a full RCRA closure?	<u> </u>	<u> X </u>	
Is a closure description document being prepared?	<u> X </u>	<u> </u>	A Major Modification to the IM/IRA for the Solar Ponds Plume has been prepared.
Will the project include excavation or capping to meet RCRA requirements?	<u> </u>	<u> X </u>	
Will the project construct or require a new or expanded waste disposal, recovery, storage, or treatment facility?	<u> </u>	<u> X </u>	

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YES NO NOTES

Will the project increase solid waste generation?

_____ X _____

Project will reduce treatment at B374.

If YES, by about how much?

It is anticipated that the reactive media within the treatment cells will require replacement every 10 years. Therefore, approximately _____ yd³ of waste media will be generated every 10 years.

Will cost and duration stay within \$5 million and 60 months?

_____ X _____

System installation will take less than \$5 million and 60 months.

If NO, please explain below or in #9, Project Description.

13. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):

Are project activities required by the Rocky Flats Cleanup Agreement?

_____ X _____

If YES, is the project described in a document that has been approved or will be approved by EPA or CDPHE before project work begins?

_____ X _____

If YES, has that document been reviewed by the K-H ESS group for inclusion of NEPA values and environmental compliance?

_____ X _____

Will the project include decontamination and decommissioning of a facility?

_____ X _____

Will the project include environmental restoration?

_____ X _____

Will the project be near an Individual Hazardous Substance Site (IHSS)?

_____ X _____

Will the project be in or near a Potential Area of Concern (PAC)?

_____ X _____

If YES, the project is in an IHSS or PAC, please explain below or in #9, Project Description. Include a map of the project if possible.

The uppermost ITS trench will be plugged. This is within IHSS-101 (see map attached). The plume of groundwater plume is derived from the Solar Ponds.

14. Will soils be disturbed?

_____ X _____

If YES, are soils suspected to be contaminated?

_____ X _____

Chemically contaminated?

_____ X _____

Potentially with nitrate

Radiologically contaminated?

_____ X _____

Potentially with uranium

If YES, will a soil disturbance permit be prepared?

_____ X _____

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	YES	NO	NOTES
15. Monitoring:			
Will the project require performance monitoring per RFCA or IM/IRA requirements?	<u>X</u>	<u> </u>	
If YES, have appropriate steps been taken to implement those requirements through the Integrated Monitoring Plan?	<u>X</u>	<u> </u>	Groundwater monitoring will be performed after the remedial action has been completed and conducted under the IMP.
If the project is D&D, have provisions to install groundwater monitoring wells been established?	<u> </u>	<u> </u>	N/A, not a D&D project.
16. Toxic Substances Control Act (TSCA):			
Will asbestos be removed or handled?	<u> </u>	<u>X</u>	
Will an Asbestos Abatement Permit be obtained?	<u> </u>	<u>X</u>	
Will the project generate PCB-containing waste?	<u> </u>	<u>X</u>	
Will the project generate potential PCB-containing material that could be commercially resold, reused, or recycled?	<u> </u>	<u>X</u>	
17. Pollution Prevention:			
For construction projects, do contracts specify the use of recycled materials (as per the Affirmative Procurement requirements of EO 13101)?	<u>X</u>	<u> </u>	
Has energy efficiency been considered?	<u>X</u>	<u> </u>	Yes this is a passive system with low maintenance/energy costs.
Have other pollution prevention measures been considered?	<u> </u>	<u>X</u>	
If YES, please explain below or in #9, Project Description.			
18. Safe Drinking Water Act (SDWA):			
Could the project affect drinking water sources or supplies?	<u> </u>	<u>X</u>	
19. Will the project present a radiation health and safety concern during construction or operation (Price-Anderson Act)?	<u>X</u>	<u> </u>	There is potential for low levels of radiation in the soils.
20. Is the project part of an agreement between DOE and another federal or state agency?	<u>X</u>	<u> </u>	Yes, this is a RFCA milestone.
21. Is the project:			
A new process, equipment, building, etc.?	<u>X</u>	<u> </u>	
A modification to an existing process, building, etc.?	<u> </u>	<u>X</u>	
An installation of capital equipment?	<u>X</u>	<u> </u>	Treatment Cells will be installed.
	<u> </u>	<u> </u>	
	<u> </u>	<u> </u>	

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YES NO NOTES

22. Will the project be located in or adversely affect:

Potentially effect Preble's Mouse habitat?

_____ X

Project is close to, but not in Preble's Mouse habitat.

Wetlands (e.g., dredge or fill operations)?

_____ X

Designated natural areas?

_____ X

Prime agricultural land?

_____ X

Special water sources (e.g., drinking water, Great Western Reservoir)?

_____ X

Historical, archaeological, or architectural sites or buildings?

_____ X

While the Reduced Infiltration/Wetlands Treatment project site would be within the Historic District boundaries, no impact is expected to occur to protected structures.

If YES, please explain below or in #9, Project Description.

23. Will the project result in a long-term increase in noise levels?

_____ X

24. Will the project result in, or have the potential to result in, long-term changes to the environment?

X _____

Water flow in the aquifer and from the aquifer to the creek will increase as a result of installing the treatment system.

25. Will the project have effects on the environment that are likely to be publicly controversial?

_____ X

26. Will the project establish a precedent for future projects that will have significant effects, or represent a "decision in principle" about a future consideration?

_____ X

Is the project related to other projects or to a larger program?

X _____

If YES, please explain below or in #9, Project Description.

The design of the barrier trench and treatment cells is similar to the treatment system in use at the Mound Plume Project and the East Trenches Plume Project.

Approved by Company's (RMRS, SSOC, K-H, WSI, or RFCSS) Environmental Manager:

Jed A Hopkins
Signature

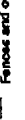
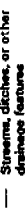
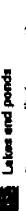
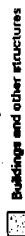
5/19/99
Date

Plan View of Reactive
Barrier Treatment System
Solar Ponds Plume
Figure SP-1

LEGEND



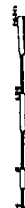
Standard Map Features



DRAFT



Scale = 1:1000
1 inch represents 100 feet



State Plane Coordinate Projection
NAD 83
Datum: NAD 83

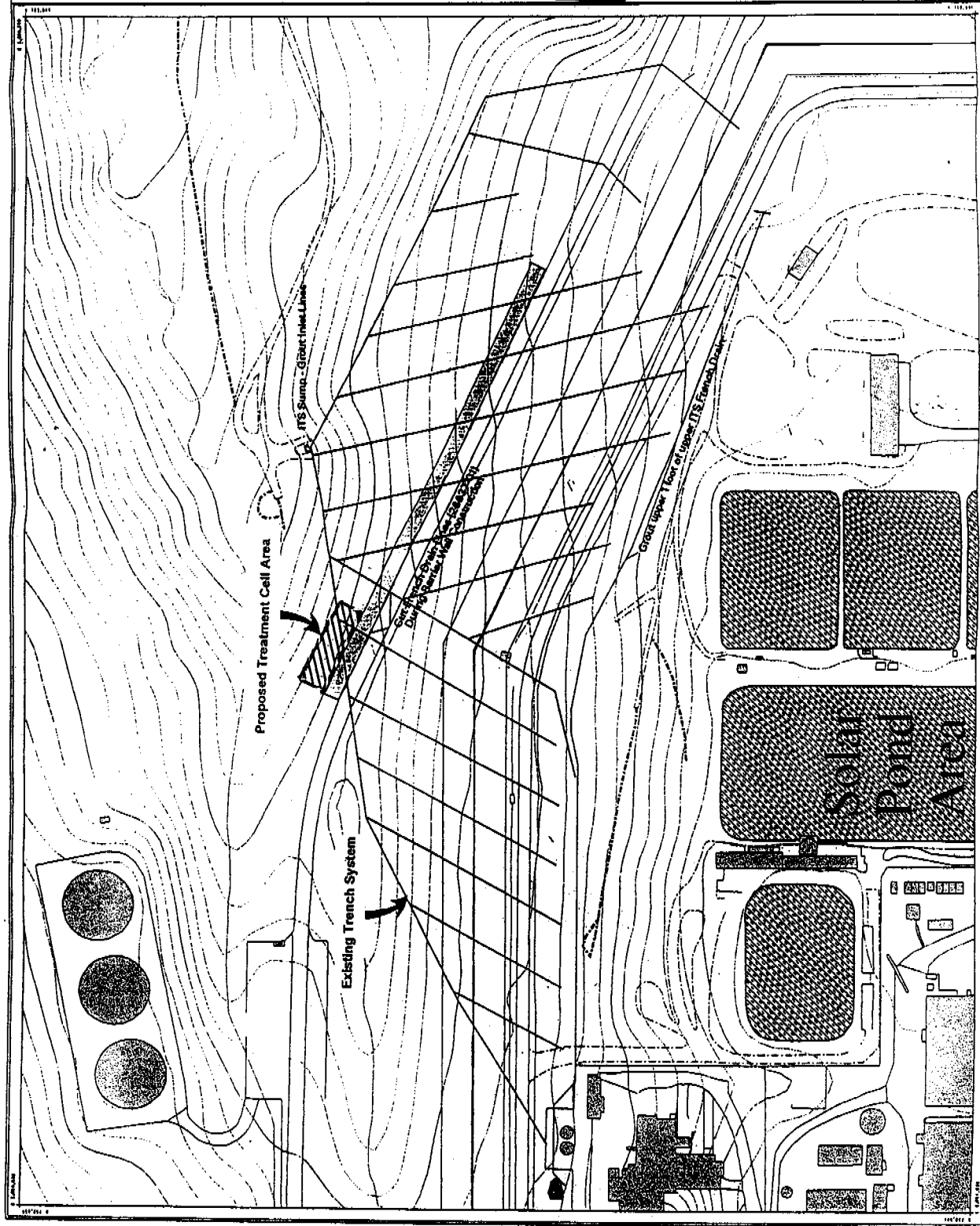
U.S. Department of Energy
Rocky Flats Environmental Technology Site

Prepared by

FMRS

Rocky Mountain
Remediation Services, LLC
Remediation Services Group
10000 North Lincoln Avenue
Suite 200
Denver, CO 80231

MAP ID: 88-0005
December 04, 1998



Best Available Copy

Solar Ponds Plume Project

An 850 ft long groundwater collection and treatment system will be installed this summer to:

- Treat nitrate and uranium contaminated groundwater
- Water is currently collected by the ITS and is treated at the B374 Evaporator

This is a RFCA milestone for September 30, 1999 as well as a Performance Measure.

- Construction start will be on June 1 due to an agreement with the US Fish and Wildlife based on nearby Preble's Mouse.
- Project must be expedited to be completed in time.

Emergency access to the project site is expected to be maintained.

Solar Ponds Plume Project

The project's working area is very limited due to Preble's Mouse Habitat and the Protected Area Fence.

An 850 foot long excavation approximately 30 feet deep will be dug within 20 feet of the roadway.

- Road way will be damaged/destroyed during activities

At least 4 pieces of heavy equipment will be used simultaneously to install the system.

- 2 cranes, 1 excavator, 1 haul truck

There is potential for slope failure during this project.

- Unstable soils with slumping were observed during similar projects

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